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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/816,197	03/31/2004	Charles S. Desilets	021356-000320US	7506
20350	7590	02/24/2005	EXAMINER	
TOWNSEND AND TOWNSEND AND CREW, LLP			JUNG, WILLIAM C	
TWO EMBARCADERO CENTER			ART UNIT	
EIGHTH FLOOR			PAPER NUMBER	
SAN FRANCISCO, CA 94111-3834			3737	

DATE MAILED: 02/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/816,197

Applicant(s)

DESILETS ET AL.

Examiner

William Jung

Art Unit

3737

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>17062004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by *Levin et al* (US 6,241,703).

Levin et al anticipate all claimed features in claims 1 and 10. Levin et al disclose a system for producing vortex ultrasound focal field comprising a mechanically formed ultrasound transducer that has irregular shape to produce mechanical vortex where the ultrasound transmission achieves focusing on treatment (col. 25, lines 1-12; col. 7, lines 1-17; figure 49A). The shape of the transducer is irregular so that the resulting ultrasound causes vortex.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Levin et al* as applied to claim 1 above, and further in view of *Dias et al* (US 5,400,788).

Levin et al substantially disclose all claimed features in claims 2-6. However, Levin et al remains silent as to detailed structure of the ultrasound transducer. In ultrasound transducer art it

Art Unit: 3737

is well known ultrasound transducer described by Levin et al includes transducer with a solid piezoelectric material, composite piezoelectric material with one or more matching layers and backing material for the back of the transducer as evident by a typical ultrasound transducer by Dias et al (col. 6, lines 13–65). Therefore, it would have been obvious to one having an ordinary skill in the art at the time the invention was made to apply Dias et al's teaching of ultrasound transducer structure to Levin et al.

5. Claims 7-9, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Levin et al* as in view of *Dias et al*.

Levin et al anticipate all claimed features in claims 1 and 10. Levin et al disclose a system for producing vortex ultrasound focal field comprising a mechanically formed ultrasound transducer that has irregular shape to produce mechanical vortex where the ultrasound transmission achieves focusing on treatment (col. 25, lines 1-12; col. 7, lines 1-17; figure 49A). The shape of the transducer is irregular so that the resulting ultrasound causes vortex. However, Levin et al remains silent as to detailed structure of the ultrasound transducer. In ultrasound transducer art it is well known ultrasound transducer described by Levin et al includes transducer with PZT elements suspended in a polymer or epoxy layer where the figures 1-3 illustrates transducer with liquid state and fixed solid state in figure 4. In addition, Dias et al illustrate in figure 8 where the transducer structure is segmented, i.e. diced. Therefore, it would have been obvious to one having an ordinary skill in the art at the time the invention was made to apply Dias et al's teaching of ultrasound transducer structure to Levin et al.

Art Unit: 3737

Conclusion

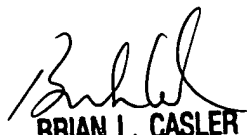
Any inquiry concerning this communication or earlier communications from the examiner should be directed to William Jung, Ph.D. whose telephone number is 571-272-4739. The examiner can normally be reached on Mon-Fri 8:30 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on 571-272-4956. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ACS

February 18, 2005


BRIAN L. CASLER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700